

Title (en)

Turbine expansion refrigeration cycle having a turbine bypass

Title (de)

Kältekreislauf mit Entspannung in einer Turbine mit einem Turbinenbypass

Title (fr)

Cycle frigorifique à détente par turbine, avec contournement de la turbine

Publication

EP 0728996 B1 20010523 (EN)

Application

EP 96630004 A 19960125

Priority

US 38011695 A 19950130

Abstract (en)

[origin: US5515694A] A single-fluid two-phase turbine expander is employed in a compression-expansion refrigeration system. The turbine has nozzles of fixed, predetermined orifice and is designed for optimal operation in steady-state normal conditions. A main float valve governs the refrigerant flow to the turbine expander. In order to accommodate off-design conditions, a bypass conduit carries liquid refrigerant around the turbine expander directly to the evaporator. In this case a bypass float valve opens the bypass conduit when the liquid level in the condenser sump reaches a predetermined high level. Alternatively, a float switch and a bypass solenoid can be employed.

IPC 1-7

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IPC 8 full level

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CPC (source: EP KR US)

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Cited by

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US 5515694 A 19960514; AU 4218096 A 19960808; AU 694595 B2 19980723; BR 9600220 A 19980106; CN 1085825 C 20020529; CN 1135036 A 19961106; DE 69612891 D1 20010628; DE 69612891 T2 20010927; EP 0728996 A2 19960828; EP 0728996 A3 19980121; EP 0728996 B1 20010523; HK 1004862 A1 19981211; JP 2686060 B2 19971208; JP H08261584 A 19961011; KR 0184654 B1 19990501; KR 960029735 A 19960817; MY 113897 A 20020629

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